

objective lens for focusing said first light beam or said second light beam to the signal recording surface of an optical recording medium of a first type matching to the first wavelength or that of an optical recording medium of a second type matching to the second wavelength, whichever appropriate; a photodetector for detecting the light beam focused on the signal recording surface of the optical recording medium of the first type or that of the optical recording medium of the second type, whichever appropriate, by the objective lens and reflected by the signal recording surface; and a diffraction element arranged in the light path from the light sources to the photodetector by way of one of the first or second type of optical recording medium, the diffraction element having a first diffraction angle and a second diffraction angle, wherein a difference between the first diffraction angle and the second diffraction angle is predetermined to offset a distance separating the first light source and the second light source; at least one of the first light beam adapted to be used for reading information signals from the signal recording surface of the optical recording medium of the first type and reflected by the reflecting surface, or the second light beam adapted to be used for reading information signals from the signal recording surface of the optical recording medium of the second type and reflected by the reflecting surface being diffracted by the diffraction element, wherein the first diffraction angle diffracts the first reflected light beam and the second diffraction angle diffracts the second reflected light beam so that the first reflected light beam and the second reflected light beam being focused to a same spot on the light receiving surface of the photodetector.

Applicant notes that independent claims 2, 9, 10, and 29 similarly recite the diffraction element having a first diffraction angle and a second diffraction angle, wherein a difference between the first diffraction angle and the second diffraction angle is predetermined to offset a distance separating the first light source and the second light source and wherein the first diffraction angle diffracts the first reflected light beam and the second diffraction angle diffracts the second reflected light beam so that the first reflected light beam and the second reflected light beam being focused to a same spot on the light receiving surface of the photodetector;

Shimano discloses an optical head that eliminates a disturbance that occurs in a focus error signal in association with the decentering of an optical disk when an optical spot crosses a track on a storage film surface, and in addition the optical head cancels an off-set which occurs in a tracking error signal in association with the movement of an objective lens.

Referring to Fig. 20, *Shimano* illustrates an optical system comprising a 650 nm semiconductor laser 2001, a 780 nm semiconductor laser 2002, diffraction gratings 2003 and 2004 that generate $\pm 1^{\text{st}}$ order diffracted lights that correspond to laser 2001 and 2002, respectively. The semiconductor laser 2001 is reflected by a dichromatic mirror 2005, passes through a beam splitter 2006, and is reflected at a triangle reflection mirror 2007 and converged on a recording medium 2009 by an objective lens 2008. Light reflected from the recording medium 2009, passes through objective lens 2008, is reflected by the triangle reflection mirror 2007, passes through the beam splitter 2006, the dichromatic mirror 2005, and an optical component G, and converged on an optical detector 2010. The optical component G can be a curvilinear diffraction grating 2101 or 2102 either of which outputs optical spots for each of the 0-order and $\pm 1^{\text{st}}$ order diffracted lights generated by diffraction grating 2003 or 2004. The optical spots are output in various predetermined locations on the optical detector surface. The Office Action acknowledges that *Shimano* fails to disclose, teach, or suggest that the curvilinear diffraction grating includes a first and second diffraction angle associated with the reflected light beams of the first and second light sources, respectively. Further, the Office Action relies on *Shimano* to remedy this deficiency.

Sugawara discloses a holographic unit that 10a includes an optical diffraction element, a light emitting device 10b, a photodetection device 10c, a light emitting and receiving unit 10d including the light emitting device 10b and the photodetection device 10c. The light emitting and receiving unit 10d is fixedly bonded to the holographic unit 10a through an adhesive. *Sugawara* fails to disclose, teach, or suggest at least the diffraction element having a first diffraction angle and a second diffraction angle, wherein a difference between the first diffraction angle and the second diffraction angle is predetermined to offset a distance separating the first light source and the second light source, as recited in the claims. The Office Action alleges that the diffraction grating recited in the claims is well known. However, the example purportedly provided by *Sugawara* falls far short of supporting this position. For example, *Sugawara* cannot show a diffraction element having the properties or capabilities of the diffraction element recited in the claims at least because *Sugawara* has a single light emitting device 10b. Thus, it would be impossible for *Sugawara* to show diffraction element having a first diffraction angle associated with light from a first light source and a second diffraction angle associated with light from a second light source.

In sum, *Shimano* and *Sugawara* either singly or combined fail to disclose, teach, or suggest at least the diffraction element having a first diffraction angle and a second diffraction angle, wherein a difference between the first diffraction angle and the second diffraction angle is predetermined to offset a distance separating the first light source and the second light source. The Office Action has not provided ample evidence to show how one of ordinary skill in the art would be motivated to substitute a single diffraction element of *Sugawara* for the two diffraction elements of *Shimano* and achieve the same results. In particular, *Sugawara* fails to provide support for combining the references because it *Sugawara* lacks the capacity to diffract a first light source and a second light source to achieve the results as recited in the claims. Accordingly, a *prima facie* case for obviousness has not been established.

As noted above, claim 1 recites, among other things, the diffraction element having a first diffraction angle and a second diffraction angle, wherein a difference between the first diffraction angle and the second diffraction angle is predetermined to offset a distance separating the first light source and the second light source and wherein the first diffraction angle diffracts the first reflected light beam and the second diffraction angle diffracts the second reflected light beam so that the first reflected light beam and the second reflected light beam being focused to a same spot on the light receiving surface of the photodetector. To properly anticipate a claim, the document must disclose, explicitly or implicitly, each and every feature recited in the claim. See Verdegall Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Because *Shimano* and *Sugawara* either singly or combined fail to disclose, teach, or suggest at least a diffraction element as recited in claims 1, 2, 9, 10, and 29, Applicant submits that the rejection is improper. Accordingly, Applicant respectfully requests that the rejection of claims 1, 2, 9, 10, and 29 be withdrawn and these claims be allowed.

Claims 17-19 depend from claim 1, claims 20-22 depend from claim 2, claims 23-25 depend from claim 9, and claims 26-28 depend from claim 10. By virtue of this dependency, Applicant submits that claims 17-28 are allowable for at least the same reasons discussed above with respect to claims 1, 2, 9, and 10. Moreover, claims 17-28 are allowable for at least the additional elements recited therein, and particularly within each claimed combination. Accordingly, Applicant submits that the rejection of claims 17-28 under 35 U.S.C. §103 be withdrawn, and these claims be allowed.

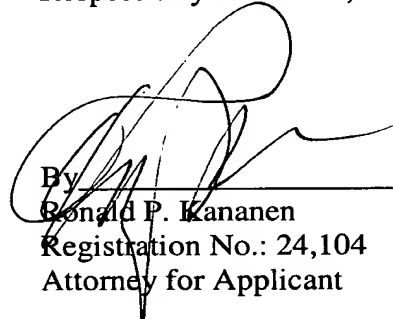
Conclusion

Based on at least the foregoing amendments and remarks, Applicant submits that claims 1-10 and 17-29 are allowable, and this application is in condition for allowance. Accordingly, Applicant requests favorable reexamination and reconsideration of the application. In the event the Examiner has any comments or suggestions for placing the application in even better form, Applicant requests that the Examiner contact the undersigned attorney at the number listed below.

Applicant believes no fee is due with this request. However, if a fee is due, please charge our Deposit Account No. 18-0013, under Order No. SON-2045 from which the undersigned is authorized to draw.

Dated: February 23, 2004

Respectfully submitted,


By _____
Ronald P. Kananen
Registration No.: 24,104
Attorney for Applicant

RADER, FISHMAN & GRAUER, PLLC

Lion Building
1233 20th Street, N.W., Suite 501
Washington, D.C. 20036
Tel: (202) 955-3750
Fax: (202) 955-3751
Customer No. 23353

DC146671

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